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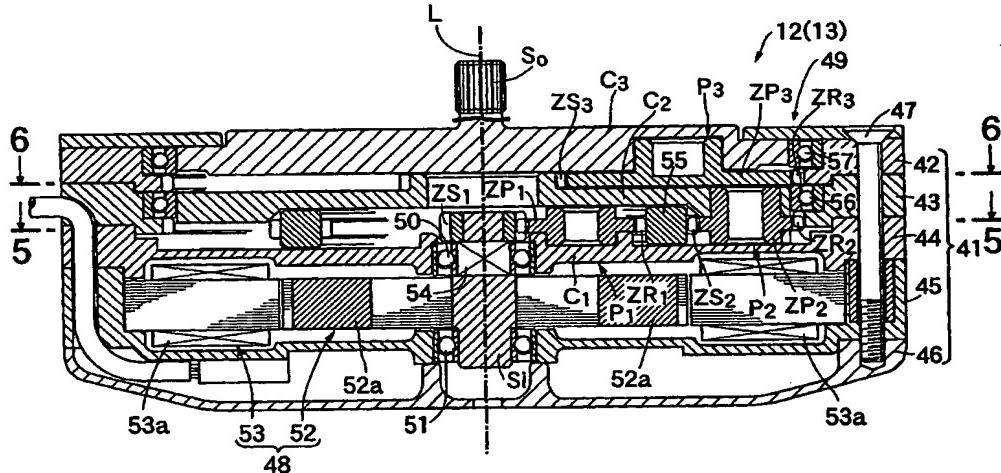
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(54) Title: SPEED REDUCER FOR WALK ASSIST APPARATUS

(54) 発明の名称: 歩行補助装置の減速機



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(57) Abstract: A speed reducer (49) for a walk assist apparatus comprises first-third planetary gear mechanisms ( $P_1, P_2, P_3$ ) between an input shaft ( $S_i$ ) connected to a motor (48) and an output shaft ( $S_o$ ). The second planetary gear mechanism ( $P_2$ ) is provided radially outside the first planetary gear mechanism ( $P_1$ ) connected to the input shaft ( $S_i$ ), and the third planetary gear mechanism ( $P_3$ ) is provided outside, in an axis ( $L$ ) direction, the first planetary gear mechanism ( $P_1$ ). As a consequence, the thickness of the speed reducer (49) can be made less than the case where the rotation of the input shaft ( $S_i$ ) is reduced in three stages by the first-third planetary gear mechanisms ( $P_1, P_2, P_3$ ) and transmitted to the output shaft ( $S_o$ ) with all the planetary gear mechanisms ( $P_1, P_2, P_3$ ) laid over each other in the axis ( $L$ ) direction. This results that the appearance of the walk assist apparatus when worn by a user is improved.

(57) 要約: 歩行補助装置の減速機 (49) はモータ (48) に接続された入力軸 ( $S_i$ ) と出力軸 ( $S_o$ ) との間に、第 1 ~ 第 3 プラネタリギヤ機構 ( $P_1$  ~  $P_3$ ) を備えており、入力軸 ( $S_i$ ) に接続された第 1 プラネタリギヤ機構 ( $P_1$ ) の半径方向外側に第 2 プラネタリギヤ機構 ( $P_2$ ) を配置し、第

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## ABSTRACT

A reduction gear (49) for a walking assistance system is provided that includes first to third planetary gear mechanisms ( $P_1$  to  $P_3$ ) between an input shaft (Si) connected to a motor (48) and an output shaft (So), the second planetary gear mechanism ( $P_2$ ) being disposed radially outside the first planetary gear mechanism ( $P_1$ ) connected to the input shaft (Si), and the third planetary gear mechanism ( $P_3$ ) being disposed outside, in the direction of an axis L, the first planetary gear mechanism ( $P_1$ ). It is therefore possible, while reducing the speed of rotation of the input shaft (Si) in three stages by the first to the third planetary gear mechanisms ( $P_1$  to  $P_3$ ) and transmitting the rotation to the output shaft (So), to reduce the thickness of the reduction gear (49) compared with a case in which the first to the third planetary gear mechanisms ( $P_1$  to  $P_3$ ) are disposed so as to be stacked in the direction of the axis (L), thereby improving the appearance when a user is fitted with the walking assistance system.